

Notice of Allowability

Application No.

10/035,948

Examiner

Charles Chow

Applicant(s)

KHAN ET AL.

Art Unit

2685

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/7/2005.
2. ☒ The allowed claim(s) is/are 1-48.
3. ☒ The drawings filed on 24 December 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Detailed Action

Allowable Subject Matter

1. The following is an examiner's statement of reasons for allowance:

In the amendment, applicant pointed out again the cited reference Fontenot can not be combined with Suzuki, because Fontenot teaches the permit based packet for the prioritization scheme which prevents the admission of packet data into packet network to be delivered to the destination (last paragraph of page 14 of applicant's amendment), which is different from primary reference, Suzuki, to be motivated enough to combine with Fontenot's permit packet (pages 12-13 of applicant's amendment), for such allowable features for the daisy chain base stations, connected to base station controller, having shared communication link, the node of a base station including a first priority queue for scheduling packets to be transmitted over shared link, and the first priority queue schedules packets based on a location of a terminating node for each packet, such that the packet transmission traffic can be controlled, without collision, based on the scheduled transmission priority, which is according to the location of the terminating node of a based station, to reduce the transmission delay.

Claims 1- 48 are allowable over the prior art of record, the cited prior arts, as well as argued by applicant, do not teach the allowable features singly, particularly, or in combination, for the subject matter, for a radio access network comprising a base station controller, a plurality of radio base stations connected to the base station controller in a daisy chain configuration via a shared communication link, wherein the base station controller and each radio base station comprises a node in a chain, at least one node in the chain including a first priority queue for scheduling packets to be transmitted via a shared communication link to an adjacent node in the chain, and wherein the first priority queue schedules packets for

transmission over shared communication link based on a location of a terminating node for each packet [claims 1, 23, 37]. The dependent claims are also allowable due to their dependency upon the independent claims and the additional claimed features.

The closest prior art **Suzuki (US 6,490,264B1)** teaches data transmission in daisy chain base stations, connected to base station controller, having the transmission controlling method which is based on allocation pattern information in the header of a transmitted cell (abstract, Fig. 3, first to third area in Fig. 6), the connection pattern (Fig. 9, Fig. 13/15; col. 5, line 66 to col. 7, line 40; col. 2, line 65 to col. 3, line 50).

Suzuki fails to teach the **first priority queue for scheduling packets, and the first priority queue schedules packets based on a location of a terminating node for each packet.**

Fontenot (US 4,616,359) teaches the queues 12-15, 21-24 for each node (Fig. 1, abstract), the permit packet is prioritized at the front of the queue ahead of all data packets and behind any permit packets already in the queue (col. 3, line 47 to col. 4, line 4; col. 4, lines 5-19; steps in Fig. 2, Fig. 3). Fontenot fails to teach **first priority queue schedules packets based on a location of a terminating node for each packet.**

Other prior arts in below has been considered, but they fail to teach the above claimed features.

Falco et al. (US 6,501,733 B1) teaches the output buffer memory 36 has first queue to Nth queue 22-24, Fig. 1, and the transmission priority scheme (col. 2, lines 33-46), the scheduling of the transmitted data in queue for data received in input holding memory 23 in the node 14 based on the scheduler 28 (abstract, Fig. 2A-2B, col. 4, lines 20-65; col. 9, line 10 to col. 12 line 34).

Ofek et al. (US 6,778,536 B1) teaches the sub-queues for constant bit rate CBR, variable bit rate VBR, of the time frame queuing 36C (Fig. 10, col. 21, lines 21-42), having a

scheduling controller 36-1 (Fig. 7), utilizing scheduling header information P1/P2 to provide priority levels (Fig. 6, col. 18, line 42 to col. 19, lines 17).

Pei et al. (US 6,167,049) teaches the engine 31 using the header information to identify a particular ATM circuit (col. 9, line 65 to col. 10, lines 11), by utilizing a table (Fig. 5-6), to related the priority levels and the virtual circuit VC1-VC5 (col. 11, line 48 to col. 16, line 65).

Earnshaw et al. (US 2003/0012,212 A1) teaches when the message is not received, a panic timer expires and the transmitter sends one or more copies of the corresponding data block to a receiver before occurrence of delay, for the immediate transmitting of packet, once the panic timer is timed out (abstract, Fig. 3).

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (703) 306-5615. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (703) 305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

Art Unit: 2685

applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Charles Chow C.C.

May 20, 2005.


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2300